Nevada Natural Heritage Program

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BIOTICS METADATA

(updated 20 January 2006)

Data Description: Spatial survey and observation records for at-risk species of conservation concern in and near Nevada. **See under Data Files** below for additional description.

Data Use Restrictions: Complete information on limitations and restrictions for these data may be found at **http://heritage.nv.gov/limitats.htm**. In summary, (1) all data supplied, and the analytic tools and methods from which they are derived, are the privileged, confidential property of the Nevada Natural Heritage Program (NNHP), NatureServe, The Nature Conservancy, Inc., and/or those who supplied the data to NNHP, and are not to be disclosed to any other party without the consent of NNHP; (2) in any use of the data, NNHP will be cited as a source, along with the year and month it supplied the data; and (3) while NNHP strives for accuracy and completeness, the data it supplies depend on the observations and research of many individuals and organizations, new data are constantly received, and in NO CASE will the data be represented as a complete survey of any species or area.

Data File Format: ArcView 3.x shape files.

Coordinate System: Universal Transverse Mercator (UTM), Zone 11 meters, on the North American Datum of 1927 (NAD27).

Completeness of data: the full data set is always a work-in-progress, with records being revised and added daily as new or backlogged data are processed. Our ongoing objective is completely represent all of the data known to, supplied to, or gathered by us. However, **most of the observations supplied to us likely represent incomplete surveys of actual population extents, and should be interpreted as such and used with caution.**

Currency of data: 1844 to present in the full data set; varies depending on source information and data entry backlog. Since our conversion from BCD to Biotics data systems in January 2005, most of our historical records now appear as circular EOR polygons (see data files, below) of varying diameters (depending on assigned precision level), centered on a point representing our best attempt to locate the observation. Many of these older observations will be replaced by more precise point, line, or polygon observations as we continue to digitize our voluminous paper observation data into our new data system.

NOTE: as of January 2006, about 10% of the point coordinates converted from our old BCD system (supplied as circular observed areas 12.5 m in diameter) remain representative only of larger, surveyed but as-yet undigitized polygon or line observations. Therefore, the known spatial extent of these observations may be much larger than the observed area and/or the EOR currently depicted for them, until the actual surveyed extents are digitized and added to our system. The percentage of such points will decrease over time as we continue to replace them with digitized survey data.

Scale at which data are believed to meet National Map Accuracy Standards: 1:24,000.

Data Files (2):

Observed_Areas.shp:

Feature type: Polygons. **Count:** 8201 state-wide as of January 2006. **Description:** each of these polygons represents either (1) the **actual data for a single observation (about 92% as of January 2006)** of a taxon of interest, either (a) as supplied to us, or (b) as interpreted by us based on secondary or non-spatial data; or (2) a 6.25-meter buffer around **representative point coordinates (about 8% as of January 2006)** converted from our old BCD system (which may then represent a much larger, as-yet undigitized survey/observation).

Each of these observations and representative points is also interpreted to be accompanied by a variable level of precision, or **locational uncertainty**, which is provided as one of the attributes of each observation. This locational uncertainty is represented spatially in the Combined-Precision_EORs data file (see below) by buffering each observed feature with the interpreted locational uncertainty distance. (**NOTE:** legacy representative point coordinates will always have a locational uncertainty of 160.9 meters.)

Observations are conceptually either polygonal areas, lines, or single points (actual or representative), and are entered into the Biotics system as such (see the data attribute "Conceptual"). To simplify output, however, point and line observations (and legacy BCD representative points) are minimally buffered by 6.25 meters and appended to the Observed_Areas data.

Combined-Precision_EORs.shp:

Feature type: Polygons. **Count:** 7598 state-wide as of January 2006. **Description:** each of these polygons represents an Element Occurrence Record (EOR) in Biotics. An EOR is intended to approximate a natural biological population of an "element" (species or subspecies of at-risk plant or animal).

Spatially, EORs depict **two distinct kinds of information: (1)** buffering of each observation record (or legacy BCD representative point) by its respective locational uncertainty distance; and **(2)** combination (merging) of multiple observation records into a single occurrence record, based on distance between observations (usually about 1 km or greater) and other standard criteria set nationwide by NatureServe to approximate natural populations. (**NOTE:** NNHP is still in the process of implementing NatureServe EOR standards, and our separation distance is still as low as 0.1 mile in many cases.) Among the attributes, EORs also contain information summarizing the overall occurrence, based on data from the included observations.

Other Files Included:

Cover Letter.pdf is a cover letter that accompanies a specific data distribution, and should be included with any and all further authorized copies of the same data.

Biotics Metadata.pdf is the file containing these metadata, and should be included with any and all further authorized copies of the same data.

Key Attributes Common to Both Data Files:

Eo_id_num: this is a unique numeric ID assigned to each EOR. Each Observation associated with that EOR will bear the same number, allowing the two data files to be linked in ArcView, or allowing EOR data to be joined to the Observation data. **NOTE:** any Observed_Area records not bearing a value in this field were in-process at the time the data were exported, and had not yet been linked to an EOR.

Eo_num: this is the same EOR occurrence number as provided in older point data sets derived from the BCD system.

Obs_area_?, Obs_length, etc.: these fields contain the areas or lengths **reported** with the original data, **not necessarily** as eventually interpreted and depicted spatially by us. The suffixes a for acres or h for hectares may be present a part of the field names.

Datasenseo and Datasensel: a **Y** in one of these fields indicates that either this specific occurrence (EO), or all occurrences of this taxon (Element) have **restrictions on normal distribution of specific location data, due to vulnerability to poaching, collecting, vandalism, trespassing, etc**. If you have received records containing a **Y** value in either of these fields, **please take special care not to further disclose specific location data from these records.**

Elcode: the old BCD-style element code for a taxon, uniquely identifying that species, subspecies, or variety. Available for linking or joining to older BCD data sets.

Usesa_nv, State_prot, Blm_stat, Usfs_stat, Nnps_stat: codes indicating the legal or management status of this species and/or occurrence under the U.S. Endangered Species Act (USESA), the State of Nevada, the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), and the Nevada Native Plant Society (NNPS), respectively. Explanations for these codes may be found at http://heritage.nv.gov/keycodes.htm.

Shp_mod and Rec_mod: these are the dates when the spatial (Shp) or attribute (Rec) data were last modified for each record. These, along with other dates recorded in the data files, can be used to determine whether records have been modified since conversion from BCD to Biotics format. Changes starting in 5 January 2005 were made using Biotics.

Additional Key Attributes of Observed_Areas.shp:

Conceptual: this indicates whether the original observation being recorded was areal, linear, or a point in nature, prior to buffering or interpretation as a polygon.

Prec_type: indicates the spatial extent of locational uncertainty associated with an observation, as follows:

Areal – delimited: polygon feature is considered to encompass the entire true location(s) of the point, line, or polygon observation, including all locational uncertainty (no additional buffer used in Combined-Precision_EORs.shp)

Areal – estimated: uncertainty of the location data extends +/- equally in all directions from the observed point, line, or polygon feature (buffered by the specified Prec_dist/Prec_unit in Combined-Precision_EORs.shp – see below).

Linear: uncertainty of the location data extends only in two directions, along a linear feature (feature buffered by an additional 6.25 meters in all directions in Combined-Precision_EORs.shp).

Negligible: the location data for the observed feature are considered to be within the minimum mapping distance (6.25 meters) of its true location in all directions (feature buffered by 6.25 meters in Combined-Precision_EORs.shp).

Prec_dist and Prec_unit: contain the distance and units we interpreted (or were supplied to us) as the locational uncertainty around each observation record. This incorporates uncertainties in GPS accuracy, coordinate datum, mapped locations, historical descriptions, etc.

Descriptor: a short name for the observed feature, usually indicating the source and/or general location of the feature.

Mapping, Observer, Obs_date, Obs_data: these fields will contain directions and other information specific to each observation as it is entered or updated. These fields will remain blank for older records transferred from BCD, until the data are manually transferred from other fields. **NOTE: multiple observation dates (and data) may have been entered for a few of the observed features, but only the first one entered can be included in flat-file format. Therefore, older and/or more recent observations may exist for a few features. See the Firstobs and Lastobs fields in the corresponding EOR attributes to see the oldest and most recent date of all observations associated with an EOR.**

NOTE ON FINDING POSSIBLE LEGACY BCD REPRESENTATIVE POINTS: observed area records with **Conceptual** type "Point," **Descriptor** of "HDMS DEFAULT CONVERSION VALUES," and blank **Mapping, Observer, Obs_date**, and **Obs_data** fields are legacy BCD points. As of January 2006, about 90% of records meeting these criteria are actual observations, **and about 10% are representative points only for larger, surveyed but as-yet undigitized polygon or line observations that may extend far beyond the area currently depicted spatially. Legacy BCD points that are candidates for being such representative points will have a Prec_dist value of 160.9 (Prec_unit of meters), and about 14% of such candidates will actually be representative points. Contact the Nevada Natural Heritage Program** to determine if this is the case for any particular point record of interest, while we continue to replace such points with digitized survey data.

Additional Key Attributes of Combined-Precision_EORs.shp:

ID_Confirm: this indicates whether the taxon identification for one or more of the observations for a particular EOR is considered confirmed (Y), questionable (?), incorrect (N), or is assumed correct but has not been further assessed (blank). Records with (N) values are not normally included in data products.

Firstobs/Lastobs: these fields indicate the oldest and most recent (respectively) dates on which **any** of the observations included in the EOR were made. This includes only dates on which the taxon was observed to be present in the observed area.

Min/Max_elev_f/m: these fields contain the aggregate minimum and maximum elevations (in feet or meters) of **all observed features** associated with an EOR, **not including buffers added for locational uncertainty**.

Latitude/Longitude: centroid reference coordinates for the record, calculated in degrees-minutes-seconds.

X/Y: centroid reference coordinates for the record, calculated in UTM Zone-11 meters on the North American Datum of 1927 (NAD27).

BCD_prec: contains the old BCD-style precision value (S=Seconds, M=Minutes, G=General) for converted records.

(to be continued)